

REMARKS

1-10 are pending. Claims 1 and 10 are independent. Claim 10 has been withdrawn from consideration.

Restriction Requirement

The restriction requirement has been made final and claim 10 continues to be withdrawn from consideration.

Claim 10 is allegedly directed to an invention independent and distinct from the invention originally claimed. Applicants respectfully disagree.

Claim 10 recites a plasma display product produced by using a roll punch manufactured according to the process of manufacturing a roll punch that is recited in claim 1. As such, the features of the plasma display product are not being claimed in a mutually exclusive manner from the process of claim 1. In other words, claim 10 recites all of the features of claim 1 and, therefore, does not claim an invention in a mutually exclusive manner from what is recited in claim 1. Compare, in this regard MPEP §806.04(f), which indicates that it is not proper to restrict such claims.

Please note that this argument is not an admission that claims 1 and 10 are not patentably distinct.

Unfortunately, the outstanding Office Action fails to respond on the merits to these arguments, which have been repeatedly made, including in the Amendment filed on June 12,

2006. MPEP §707.07(f) requires the Examiner to fully respond to all of Applicants' arguments, yet there is no response made in the outstanding office Action to these previously presented arguments that traverse the outstanding restriction requirement. This denies Applicants fundamental substantive and procedural due process. See, in this regard, In re Zurko, 119 S.Ct. 1816, 50 USPQ2d 1930 (1999), and In re Gartside, 53 USPQ2d 1769 (Fed. Cir. 2000).

Accordingly, reconsideration and withdrawal of this restriction/election requirement and examination on the merits of claim 10 are respectfully requested.

Additionally, the finality of the restriction requirement is improper and should be withdrawn for this reason.

Applicants current reconsideration of this restriction requirement is a prerequisite to filing a petition under 37 CFR §1.144 and, as such, is an appropriate response to the restriction requirement other than canceling claim 10.

Rejection Under 35 U.S.C. §112, First Paragraph

Claims 1-9 stand rejected under 35 USC §112, first paragraph, for failing to comply with the written description requirement. This rejection is respectfully traversed.

The Office Action alleges that there is no proper basis in Applicants' original disclosure for the amendment made to claim 1 in the Amendment filed on June 12, 2006. Applicants respectfully disagree for a number of reasons. The portions of claim 1 that are in issue in this rejection recite:

“partially removing the mask from said forming roll at regularly spaced positions while rotating said forming roll, to properly adjust the intervals between the mask-free parts,” and

“positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank” (emphasis added).

Applicants respectfully submit that the claim language at issue is fully supported in Applicants’ originally filed disclosure. In the Amendment filed on June 12, 2006, Applicants stated that the amendments to claim 1 are supported, for example, on pages 8 and 9 of the main body of the specification and in original claims 4 and 5, and believe that that statement is accurate. Applicants will present more specific detail in this regard, below.

Page 8 of the main body of Applicants’ originally filed specification, starting at line 11, clearly states that “[A]t the second step S2, the mask 22 is partially removed from the forming roll 21 using a laser beam or a cutting bite 23 at regular spaced positions, thus forming an intermediate product 25 having a plurality of regularly spaced mask-free parts where desired partition wall forming grooves 41 are to be formed at a later step. In the second step S2, the forming roll 21 is rotated in a direction. In the present invention it is possible to produce a desired highly precise roll punch by properly adjusting the intervals between the mask-free parts of the intermediate product 25 at said second step.”

Applicants’ specification continues on page 8, starting at line 22, by stating that “[T]he intermediate product 25 from the second step S2 is, thereafter, sunk and fixed in an etching tank at the third step S3. In such a case, two ultrasonic vibrators 31a and 31b are placed within the

etching tank 30 at opposite positions, and so the forming roll 21 of the intermediate product 25 is partially etched at the regularly spaced mask-free parts by ultrasonic waves from the two ultrasonic vibrators 31a and 31b.”

Applicants also note that Fig. 4 clearly shows the positions of ultrasonic vibrators 31a and 31 b and of intermediate product 25 in the etching tank 30, and that each ultrasonic vibrator 31a or 31b is located at a side of the tank that is not the top side or the bottom side of the tank.

Accordingly, Applicants respectfully submit that claim 1 is fully supported by Applicants’ originally filed disclosure.

The outstanding Office Action does not address these portions of Applicants’ disclosure. Instead, it only addresses a statement found on page 10 of the main body of Applicants’ specification. Accordingly, the Office Action fails to make out a *prima facie* case that Applicants’ originally filed disclosure does not support claim 1 in the sense of the written description requirement of 35 USC §112, first paragraph.

Reconsideration and withdrawal of this rejection of claims 1-9 under 35 USC §112, first paragraph are respectfully requested.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 2 and 6-9 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 10-193024 ("JP '024") in view of JP-02-149683 (JP '683). This rejection is respectfully traversed.

Because the rejection is based on 35 U.S.C. §103, what is in issue in such a rejection is "the invention as a whole," not just a few features of the claimed invention. Under 35 U.S.C. §103, "[a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under section 103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the Examiner must explain what the differences between the claimed invention and the prior art are and provide objective factual evidence to support a conclusion that it would be obvious to one of ordinary skill in the art to achieve the claimed invention, which includes those missing features.

In the second place, in rejecting claims under 35 U.S.C. §103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the

claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

JP '024 does not disclose a roll punch, as recited. Nor does JP '024 disclose or suggest immersing an intermediate product in an etching tank, positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank, and etching said intermediate product at the mask-free parts by radiating ultrasonic waves to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

The Office Action admits that JP '024 does not disclose ultrasonic etching.

In an attempt to remedy this deficiency, the Office Action turns to JP '683, that allegedly "discloses using ultrasonic etching to provide etched grooves having uniform depth." The Office Action then discusses the motivation for using ultrasonic waves, but never explicitly applies this teaching to JP '024.

Applicants respectfully submit that one of ordinary skill in the art would not be motivated to turn to JP '683 to modify JP '024.

Firstly, JP '204 only discloses that the surface of roll 102 is marked up to the prescribed depth, and only uses an etching liquid, showing no need for going to the trouble and expense of ultrasonic etching, and no need to produce grooves in the punch at a desired depth, thickness and sidewall inclination angle, as recited.

In response to this argument, the outstanding Office Action clearly admits that JP '024 is not expected to show the need for ultrasonic welding. The Office Action continues by stating that the rejection added ultrasound to the process of JP '024 was to improve uniformity of the etching process. However, JP '024 fails to show the need to improve

uniformity of the etching process, either, so one of ordinary skill in the art would not be motivated to go to the trouble and expense of modifying JP '024 to improve an etching process that is not shown to need improved uniformity.

Secondly, JP '683 uses a single ultrasonic generator located at the bottom of a tank to obtain a precise depth. Applicants respectfully submit that one of ordinary skill in the art would not be motivated to use an ultrasonic etching device to obtain a precise groove depth in JP '024 because JP '024 already discloses achieving this with just an etching liquid.

In response to this argument, the outstanding Office Action states that there is nothing in the Japanese abstract of JP '024 which indicates that JP '024 achieves precision in depths of the etched grooves. Applicants respectfully disagree with this statement because the English language abstract of JP '024 clearly states that the problem to be solved by JP '024 is to “provide a manufacturing method and device of a rolling and marking roll capable of marking precise and continuous patterns . . .” and also clearly states that “[T]he surface of the roll is marked up to the prescribed depth with an etching liquid.” In other words, the Abstract explicitly indicates that the invention is used to achieve “precise and continuous patterns” and discusses etching to a “prescribed depth.” In Applicants’ opinion, disclosure of an invention used to solve the problems of “precise and continuous patterns” using etching to a “prescribed depth” clearly indicates that JP '024 discloses achieving precision in the depths of etched grooves with an etchant liquid.

Thirdly, neither reference discloses producing grooves in a roll punch at a desired depth, thickness and sidewall inclination angle, as recited.

The outstanding Office Action addresses this argument not by addressing the disclosure of either of the applied references, but by referring to a hypothetical statement in the rejection of claims 4 and 5, i.e., “if the roll punch is to be used to form partition walls of a plasma display panel,” and with reference to the “Riddle” reference that is not used in the claims under rejection, i.e., claims 1, 2 and 6-9. This rejection is improper because it refers to a hypothetical situation neither disclosed nor suggested by either of the two references applied in this rejection, and because it is based on the “Riddle” reference which is not applied in the rejection of claims 1, 2 and 6-9.

Fourthly, claim 1, as amended, positively recites a combination of features including positioning at least one ultrasonic vibrator in the etching tank at a side other than the top or bottom of the immersion tank. JP ‘683’s ultrasonic generator is clearly located at the bottom of its tank.

Furthermore, claim 6 positively recites using two ultrasonic vibrators placed at opposite sides of the intermediate product. This feature is not disclosed in any of the applied references.

The Office Action addresses these last two arguments by giving the claimed features discussed in these last two arguments little patentable weight, citing several case law decisions. The first set of decisions (in footnote 1 on page 6 of the office Action) is cited for the proposition that “apparatus limitations, unless they affect the process in a manipulative sense, may have little weight in process claims.” The second pair of decisions deals with duplication of parts and the third decision (a pre-1952 Patent Act decision) deals with

rearrangement of parts. The fourth and fifth sets of decisions deal with unobvious results and the sixth set of decisions deals with intended use limitations.

Applicants respectfully submit that the case law referenced in these six sets of decisions either does not apply to the facts at hand or reflects improper per se rules of obviousness that have been shown to be improper under controlling case law. In this regard, Applicants refer to the controlling decision of the Court of Appeals for the Federal Circuit, i.e., *In re Ochiai*, 37 USPQ2d 1127 (Fed. Cir. 1995) which makes it clear that there are no per se rules of obviousness. The Court clearly stated that"

"the test of obviousness *vel non* is statutory. It requires that one compare the claim's "subject matter as a whole" with the prior art "to which said subject matter pertains." 35 U.S.C. Section 103. The inquiry is thus highly fact-specific by design. This is so "whether the invention be a process for making or a process of using, or some other process." *Kuehl* , 475 F.2d at 665, 177 USPQ at 255.

In fact, the Court held applied this statutory test to the art of record, and concludes that Ochiai's process invention as claimed was not *prima facie* obvious, where the claimed process required use of none other than a new nonobvious acid as one of the starting materials. The Court stated that one having no knowledge of this acid could hardly find it obvious to make any cephem using this acid as an acylating agent, much less the particular cephem recited in claim 6. In other words, it would not have been obvious to those of ordinary skill in the art to choose the particular acid of claim 6 as an acylating agent for the known amine for the simple reason that the particular acid was unknown but for Ochiai's disclosure in the '492 application. As one of our predecessor courts had occasion to observe, in a case involving a highly analogous set of facts, "one cannot choose from the unknown." *Mancy* , 499 F.2d at 1293, 182 USPQ at 306.

The Court also stated that the examiner incorrectly drew from *Durden*, a case turning on specific facts, a general obviousness rule: namely, that a process claim is obvious if the prior art references disclose the same general process using "similar" starting materials. No such *per se* rule exists. Mere citation of *Durden*, *Albertson*, or any other case as a basis for rejecting process claims that differ from the prior art by their use of different starting materials is improper, as it sidesteps the fact-intensive inquiry mandated by section 103. In other words, there are not "*Durden* obviousness rejections" or "*Albertson* obviousness rejections," but rather only section 103 obviousness rejections.

The Court continued by stating that the Board essentially repeated the examiner's error of sidestepping the particularized inquiry required by section 103 by grounding the rejection on

the supposedly "controlling" effect of "[c]ases such as *In re Larsen*, *In re Albertson*, and, particularly, *In re Durden*, all of which were directed to processes of making chemical compounds." *Ochiai*, 24 USPQ2d at 1267 (citations omitted). After categorizing the process recited in claim 6 as a "process of making" rather than as a "process for using," the Board reached its conclusion according to the following syllogism: (a) "process of making" claims have led to rejections, as in *Larsen*, *Albertson*, and *Durden*, whereas "process for using" claims have led to allowances, as in *Kuehl*, *Mancy*, and *Pleuddemann*; (b) *Ochiai*'s claim is directed to a "process of making"; (c) therefore, the rejection should be affirmed. *Id.* at 1268-70. This method of analysis is founded on legal error because it substitutes supposed *per se* rules for the particularized inquiry required by section 103. It necessarily produces erroneous results. Moreover, the Board indulged a non sequitur when it grounded its conclusion of obviousness on the assertion that the starting materials recited in claim 6 are "similar" to those of the prior art. The recited acid is nonobvious, having itself been patented based on the parent application. Nor did the Board justify its characterization of "similar[ity]" in any other manner. Similarity is, as we noted above, not necessarily obviousness."

Applicants respectfully submit that (1) the statement that the placement and number of ultrasound vibrating units have little weight in process claims is incorrect based on the aforementioned "Ochiai" decision, which accords the starting material limitation significant patentable weight; (2) the statement that the duplication and rearrangement of parts have been held to be obvious is an improper *per se* rule of obviousness and is improper because it fails to apply the facts of the cited cases to the facts at issue. (for example, in the cited "Japikse" case, Japikse claimed a hydraulic power press. Claim 3 of Japikse allegedly read on the Cannon reference except for the feature, "means disposed in alignment with said opening for contact by said depending means to start the pressing operation of said hydraulic press." The Board held that there would be no invention in shifting the starting switch disclosed by Cannon to a different position since the operation of the device would not thereby be modified. The Court found no error in that holding of the Board. The present rejection and these arguments fail to apply the facts of the Japikse case to the facts of this case where the position of the ultrasonic units is an operational aspect of the etching process); (3) the indication that applicant has a the burden to

show an unexpected result based on the configuration of an apparatus used in the claimed process is an improper attempt to shift the burden of making out a prima facie case of obviousness from the Office to applicant based on the case law cited above regarding the burden of proof and because of the failure of the applied art to disclose or suggest such an arrangement; and (4) the statement that intended use limitations do not limit the claims is improper because the claims in issue are process claims, not “apparatus, article, and composition claims” to which the Office Action states “intended use” features are said to apply.

Furthermore, as an alternative, claim 8 positively recites an etching step that includes etching intermediate product at the mask-free parts within an etching tank provided with at least one ultrasonic vibrator by radiating ultrasonic waves from said at least one ultrasonic vibrator towards the mask-free parts while rotating said intermediate product. None of the applied references disclose or suggest this feature that includes etching while rotating the intermediate product.

This argument, which was also presented in the Amendment filed on June 12, 2006, has not been addressed in the outstanding Office Action, contrary to the requirement of the Examiner, found in MPEP §707.07(f), to respond to all of Applicants’ substantive arguments on their merits. Because this argument was not addressed, it would appear that the Examiner tacitly agrees with it.

Accordingly, the Office Action has not made out a *prima facie* case of proper motivation to modify JP ‘024 in view of JP ‘683, as suggested.

Reconsideration and withdrawal of this rejection of claims 1, 2 and 6-9 is respectfully requested.

Claims 4 and 5 stand rejected under 35 U.S.C. §103(a) as unpatentable over JP '024 in view of JP '683 as applied to claim 9, in view of U.S. patent 5,747,931 to Riddle et al. ("Riddle"). This rejection is respectfully traversed.

Initially, Applicants note that the JP '024 and JP '683 reference combination is improper at least for reasons discussed above. Nor is Riddle applied to supply these deficiencies. Accordingly, even if it were proper to modify the base reference combination as suggested in view of Riddle, the modified version of the base reference combination would still not render the claimed invention obvious.

In the alternative, the Office Action admits that neither JP '024 nor JP '683 discloses forming a roll punch with vertical side walls as recited. In an attempt to remedy this deficiency, the Office Action turns to Riddle. Riddle discloses an embossing die 70 that is formed by etching or electroforming a metal plate, and also discloses embossing rollers 72 and 74, the method of making these rollers not being disclosed.

The Office Action fails to present any objective factual evidence of proper motivation for one of ordinary skill in the art to turn to Riddle to modify JP '024, which has no disclosure of being used to make plasma display device structures, in view of an embossing plate or embossing roller to make such devices.

The only apparent reason for turning to Riddle is solely based on Applicants' disclosure, which may not properly be used against them.

Accordingly, the Office Action fails to make out a *prima facie* case of proper motivation to turn to Riddle to modify JP '204.

Furthermore, the Office Action improperly fails to address the positively recited features of the roll punch made by the claimed method, as recited in detail in claims 4 and 5. In this regard, Applicants respectfully submit that all words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

None of the applied references discloses or suggests the positively recited features in claims 4 and 5.

These arguments, which were presented in the Amendment filed on June 12, 2006, have not been addressed in the outstanding Office Action, contrary to the requirement of the Examiner, found in MPEP §707.07(f), to respond to all of Applicants' substantive arguments on their merits. Because this argument was not addressed, it would appear that the Examiner tacitly agrees with it.

Accordingly, the Office Action fails to make out a *prima facie* case of obviousness of the claimed invention.

Reconsideration and withdrawal of these rejections of claims 1-9 are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

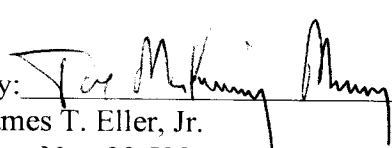
However, if there are any outstanding issues, the Examiner is invited to telephone Robert J. Webster, Reg. No. 46,472, at 703-205-8000, in an effort to expedite prosecution.


If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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